Serial No. 10/789,599 Filed: February 27, 2004

Response to Non-Final Office Action of Nov. 14, 2006

Response dated March 14, 2007

Amendment to the Claims:

This listing of Claims will replace all prior versions and listing of the Claims in the application:

Listing of Claims:

1. (Currently Amended) A radio receiver comprising:

a first tuner <u>configured to</u> connected with an antenna <u>and to generate for</u> generating a first audio signal;

a second tuner <u>configured to</u> connected with the antenna <u>and to generate for</u> generating a second audio signal;

a digital signal processor configured to receive the first audio signal and the second audio signal connected with the first tuner and the second tuner, to also digitally process where the first audio signal to generate a first processed audio output signal, and to also digitally process the second audio signal are processed by the digital signal processor to generate first audio output signal and a second processed audio output signal;

a first audio power amplifier connected with the digital signal processor, and configured to receive the first processed audio output signal; and

a second audio power amplifier connected with the digital signal processor, and configured to receive the second <u>processed</u> audio output signal.

- 2. (Original) The radio receiver of claim 1 further comprising a control unit connected with the first tuner and the second tuner.
- 3. (Original) The radio receiver of claim 2 where the control unit is operable to generate a first tuner control output that is used to set the first tuner to a first selected frequency.
- 4. (Original) The radio receiver of claim 3 where the control unit is operable to generate a second tuner control output that is used to set the second tuner to a second selected frequency.

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5. (Currently Amended) The radio receiver of claim 1 where the first audio signal and the second audio signal are digitally processed simultaneously by the digital signal processor a signal quality output signal is provided to a control unit by the first tuner.

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6. (Currently Amended) The radio receiver of claim-5_4, where first tuner is configured to generate a first tuner signal quality signal, and where the control unit is configured to receive the first tuner signal quality signal, and to detect that the first tuner signal quality signal is less than a predetermined threshold of signal quality, and in response to the detection, operable to adjust the first tuner to an a first tuner alternate frequency setting.if a first frequency setting falls below a predetermined threshold of signal quality.

7. (Cancelled)

- 8. (Currently Amended) The radio receiver of claim 7-6, where the second tuner is configured to generate a second tuner signal quality signal, and where the control unit is further configured to receive the second tuner signal quality signal, and to detect that the second tuner signal quality is less than the predetermined threshold of signal quality, and in response to the detection, operable to adjust the second tuner to a second tuner an alternate frequency setting if a first frequency setting falls below a predetermined threshold of signal quality.
- 9. (Currently Amended) The radio receiver of claim 1 further comprising a first radio data system decoder connected with the first tuner and a control unit, and the first radio data system decoder is configured to generate first tuner data related to the first tuner.

10. (Cancelled)

11. (Currently Amended) The radio receiver of claim 9 further comprises a display unit operably coupled to the control unit, and the control unit is configured to receive the first

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tuner data and to control the display unit to display the first tuner data. 10 where the data is displayed on a display connected with the control unit.

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- 12. (Currently Amended) The radio receiver of claim 11 further comprising a second radio data system decoder connected with the second tuner and the control unit, and the second radio data system decoder is configured to provide second tuner data related to the second tuner to the control unit, and the control unit is further configured to control the display unit to display the second tuner data.
- 13. (Cancelled)
- 14. (Cancelled)
- 15. (Original) The radio receiver of claim 1 where the first audio power amplifier is connected with at least one speaker.
- 16. (Original) The radio receiver of claim 1 where the second audio power amplifier is connected with a headphone jack.
- 17. (Original) The radio receiver of claim 1 where the first audio power amplifier is connected with a vehicle speaker system and the second audio power amplifier is connected with a headphone jack.
- 18. (Currently Amended) A radio receiver comprising:
 - a control unit;
- a first tuner connected with the control unit, and the control unit configured to tune the first tuner capable of being tuned to a first tuner frequency setting;
- a second tuner connected with the control unit, and the control unit configured to tune the second tuner capable of being tuned to a second tuner frequency setting;
- a digital signal processor connected with the first tuner and the second tuner, and the digital signal processor configured to generate a first digitally processed audio signal as a

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function of the first <u>tuner</u> frequency setting of the first tuner, and <u>to also generate</u> a second <u>digitally processed</u> audio signal as a function of the second <u>tuner</u> frequency setting of the second <u>tuner</u>;

a first audio power amplifier connected with the digital signal processor, and the first audio power amplifier is configured to receive the first digitally processed audio signal; and a second audio power amplifier connected with the digital signal processor, and the second audio power amplifier is configured to receive the second digitally processed audio signal.

- 19. (Cancelled)
- 20. (Currently Amended) The radio receiver of claim 18 further comprising:

 a first and second radio data system decoder connected with the respective first tuner

 and second tuner and configured to provide respective first and second tuner RDS data;

 the control unit is further configured to receive the respective first tuner RDS data and second tuner RDS data.
- 21. (Currently Amended) The radio receiver of claim 20 where the <u>first tuner RDS data</u>

 <u>comprises radio data system decoder is configured to provide the control unit with a list of <u>first tuner alternative frequencies for the first tuner frequency setting.</u></u>
- 22. (Currently Amended) The radio receiver of claim 21 where the first tuner is configured to produce a first tuner signal quality signal, and the control unit is configured to receive the first tuner signal quality signal and to detect that the first tuner signal quality signal falls below a predetermined level of quality and, in response to the detection, to tune the first tuner to one of the listed first tuner an alternate alternative frequencies. frequency if a signal quality indication of the first tuner falls below a predetermined level of quality.
- 23. (Cancelled)
- 24. (Cancelled)

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- 25. (Cancelled)
- 26. (Currently Amended) The radio receiver of claim 2225 where the second tuner RDS data comprises radio data system decoder is configured to provide the control unit with a list of second tuner alternative frequencies for the second tuner frequency setting.

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- 27. (Currently Amended) The radio receiver of claim 26 where the second tuner is configured to generate a second tuner signal quality signal, and where the control unit is configured to detect that the second tuner signal quality output is less than a predetermined level of quality and, in response to the detection, to tune the second tuner to one of the listed second tuner an alternate alternative frequencies. frequency if a signal quality indication of the second tuner falls below a predetermined level of quality.
- 28. (Cancelled).
- 29. (Currently Amended) The radio receiver of claim 26-28 further comprising a display unit operably coupled to the control unit, and the control unit further configured to control the display unit to display a portion of the first tuner RDS data and the second tuner RDS data.

 where the data is displayed on a display connected with the control unit.
- 30. (Currently Amended) The radio receiver of claim 18 where the first audio power amplifier is connected with a speaker system and the second audio power amplifier system is connected with a headphone jack.
- 31. 34. (Cancelled)
- 35. (New) The radio receiver of claim 18 where the first audio power amplifier is connected with a vehicle speaker system and the second audio power amplifier is connected with a headphone jack.

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36. (New) An audio system comprising:

first tuner and second radio tuners configured to generate respective first and second radio tuner audio signals;

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a digital signal processor configured to generate a first processed audio signal based on the first radio tuner audio signal, and to generate a second processed audio signal based on the second radio tuner audio signal;

a first audio power amplifier configured to generate a first audio power amplifier signal based on the first processed audio signal; and

a second audio power amplifier configured to generate a second audio power amplifier signal based on the second processed audio signal.

- 37. (New) The audio system of claim 36 further comprising:
 a first audio speaker configured to receive the first audio power amplifier signal; and
 a headphone interface configured to receive the second audio power amplifier signal.
- 38. (New) The audio system of claim 37 where the audio system is configured to be installed in a vehicle.
- ----39.—(New)—The audio-system of claim 37 further comprising:

a controller operably coupled to the first and second radio tuners, where the respective first and second radio tuners are configured to generate respective first and second radio signal quality signals;

first and second radio data system decoders operably coupled to the controller and the respective first and second radio tuners, the respective first and second radio data system decoders operable to provide respective first and second radio tuner RDS data that includes respective first and second tuner alternative frequencies; and

the controller is configured to receive the respective first and second radio tuner RDS data and the respective first and second radio signal quality output signals, and the controller is further configured to independently detect that the respective first and second radio signal quality signals are less than a predetermined threshold of signal quality and, in response to the respective detections, to independently tune the respective first and second radio tuners to

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the respective first and second tuner alternative frequencies based on the respective detections.

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40. (New) The audio system of claim 39 further comprising a display unit operably coupled to the controller; where the first and second radio tuner RDS data comprise respective first and second radio tuner RDS data parameters; and

the controller is configured to control the display unit to display a portion of the first and second radio tuner RDS data parameters.

- 41. (New) The audio system of claim 40 further comprising:
- a user input device operably coupled to the controller and configured to receive a user command to independently control the respective first and second radio tuners.
- 42. (New) A method of providing two radio tuner audio outputs comprising: receiving first and second radio tuner audio signals from respective first and second radios;

generating respective first and second digitally processed audio signal based on the respective first and second radio tuner audio signals;

generating respective first and second-amplified processed audio signal based upon the respective first and second digitally processed audio signals;

generating respective first and second radio tuner signal quality signals related to the first and second radio tuner audio signals;

generating respective first and second quality detections in response to detection that the first and second radio tuner signal quality signals are less than a predetermined quality threshold value;

respectively tuning the first and second radio tuners to respective alternative frequencies in response to the respective first and second quality detections;

outputting the first amplified processed audio output to a speaker; and outputting the second amplified processed audio output to a headphone interface adapted to provide the second amplified processed audio output to a headphone.

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43. (New) The method of claim 42 further comprising:

generating respective first and second RDS data based on the first and second radio tuner audio signals, the respective first and second RDS data including the respective first and second alternative frequencies for the respective first and second radio tuner audio signals.

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- 44. (New) The method of claim 43, where the first and second radios are located in a vehicle.
- 45. (New) The method of claim 44, where the speaker is positioned to provide audio to a driver of the vehicle.
- 46. (New) The method of claim 45, where the headphone interface is positioned to provide audio to a passenger of the vehicle.

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